

KENTUCKY

Mechanical Drawing

BOARD & CAD TECHNIQUES

**Correlation with the
Kentucky
Drafting/Computer Assisted
Design Technology Course,
SCANS, National Standards
of Technological Literacy,
and
Responses to Vocational
Studies Evaluation Tool**

French • Hesel

**Adoption Group V
Commonwealth of
Kentucky
2004-2010**

Drafting/Computer Assisted Design Technology

ACADEMIC EXPECTATIONS	CONTENT/PROCESS	PAGE REFERENCES
6.1, 6.3	<p>Students will:</p> <ul style="list-style-type: none"> • apply core knowledge in the context of drafting/computer assisted design. 	<p>SE: 18, 23, 43-45, 49-51, 54, 85-110, 420, 430, 578, 609, 678, 684</p> <p>IRG: 103-104, 105-106, 107-108, 125-126, 133-134, 135-136, 139-140</p>
1.16, 1.11	<ul style="list-style-type: none"> • use computer based technologies to communicate process, manipulate, collect, and apply information to solve technical problems. 	<p>SE: 18, 23, 43-45, 85-110, 420, 430, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 125-126, 133-134, 139-140, 145-146</p>
2.31, 1.16	<ul style="list-style-type: none"> • develop competencies in the safe and efficient use of the tools, machines, materials, and processes of drafting/computer assisted design 	<p>SE: 26-27, 39-40, 102, 104, 106-107, 112, 389</p> <p>IRG: 42-54, 103-104, 107-108, 123-124</p>
2.36, 2.17	<ul style="list-style-type: none"> • identify opportunities, characteristics, and preparation requirements for current and emerging occupations in drafting/computer assisted design. 	<p>SE: 18-42, 128, 578, 670, 719</p> <p>IRG: 75-100, 103-104, 109-110, 133-134, 139-140, 143-144</p>

Drafting/Computer Assisted Design Technology

ACADEMIC EXPECTATIONS	CONTENT/PROCESS	PAGE REFERENCES
6.3, 2.36	<ul style="list-style-type: none"> engage in meaningful, hands-on, minds-on, and conceptual technology-based activities. 	SE: 74-84, 130-149, 176-194, 211-228, 265-275, 296-315, 333-345, 364-378, 403-416, 449-466, 482-505, 530-542, 557-564, 581-592, 609-621, 650-667, 684-691, 732-737, 755-764, 775-781, 796-800 IRG: 55-62, 105-150
1.1, 5.14	<ul style="list-style-type: none"> explore entrepreneurship and its place within the free enterprise system as a means to becoming a self-sufficient individual. 	SE: 22-23 IRG: 99-100, 103-104
6.2, 2.38	<ul style="list-style-type: none"> become participating citizens who can understand, assess, predict, control and adapt to the impacts and consequences of drafting/computer. 	SE: 18-27, 41, 578, 719 IRG: 103-104, 133-134, 143-144
6.2	<ul style="list-style-type: none"> understand the concepts of drafting/computer assisted design. 	SE: 18, 23, 43-45, 49-51, 54, 85-110, 609, 684 IRG: 103-104, 105-106, 107-108, 135-136, 139-140
5.1, 5.5	<ul style="list-style-type: none"> develop and apply problem solving, critical thinking skills and creativity to drafting/computer assisted design problems. 	SE: 35, 49-50, 245 IRG: 83-94, 100, 103-104, 105-106, 115-116

Drafting/Computer Assisted Design Technology

ACADEMIC EXPECTATIONS	CONTENT/PROCESS	PAGE REFERENCES
2.36, 2.38	<ul style="list-style-type: none"> develop personal and professional leadership skills through participation in Kentucky Technology Student Association activities. 	SE: 39 IRG: 69, 103-104
1.13	<ul style="list-style-type: none"> communicate ideas through application of drafting fundamental (e.g., sketching, multi-view drawings, 3D renderings). 	SE: 48-54, 195-215, 430-432 IRG: 105-106, 113-114, 125-126
6.2	<ul style="list-style-type: none"> experience and develop an understanding of the different sub-specialties within drafting/computer assisted design (e.g., mechanical, architectural, electrical). 	SE: 544-564, 566-592, 623-667, 669-691, 693-712, 714-737 IRG: 131-132, 133-134, 137-138, 139-140, 141-142, 143-144
2, 6.3	<ul style="list-style-type: none"> apply knowledge and experiences from drafting/computer assisted design to produce a culminating project. 	SE: 74-84, 130-149, 176-194, 211-228, 265-275, 296-315, 333-345, 364-378, 403-416, 449-466, 482-505, 530-542, 557-564, 581-592, 609-621, 650-667, 684-691, 732-737, 755-764, 775-781, 796-800 IRG: 55-62, 105-150

Drafting/Computer Assisted Design Technology

ACADEMIC EXPECTATIONS	CONTENT/PROCESS	PAGE REFERENCES
2.17, 5.4	<ul style="list-style-type: none"> demonstrate employability and social skills relative to careers. 	<p>SE: 33-39, 317, 347, 429, 531, 768, 784</p> <p>IRG: 84-87, 103-104, 119-120, 121-122, 125-126, 129-130, 147-148, 149-150</p>
6.2, 6.3	<ul style="list-style-type: none"> apply concepts from mathematics, science, and communication in the context of technology education. 	<p>SE: 25, 35, 43-45, 59, 90, 123, 151-153, 175, 207, 212, 235, 293, 336, 353, 396, 404, 420, 479, 511, 547, 577, 604, 634, 675, 696, 714-719, 745, 758, 768, 787</p> <p>IRG: 103-104, 111-112, 143-144</p>

SCANS	
A Three-Part Foundation	
Basic Skills	PAGE REFERENCES
<p>Reads, writes, performs arithmetic and mathematical operations, listens and speaks</p> <ul style="list-style-type: none"> • A. <u>Reading</u>—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules 	<p>SE: 35, 75-77, 417-466, 738-764</p> <p>IRG: 103-104, 105-106, 125-126, 147-148</p>
<ul style="list-style-type: none"> • B. <u>Writing</u>—communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts 	<p>SE: 35, 48-54, 75-77, 417-466, 738-764</p> <p>IRG: 96, 103-104, 105-106, 125-126, 147-148</p>
<ul style="list-style-type: none"> • C. <u>Arithmetic/Mathematics</u>—performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques 	<p>SE: 25, 35, 43-45, 59, 90, 123, 151-153, 175, 207, 212, 235, 293, 336, 353, 396, 404, 420, 479, 511, 547, 577, 604, 634, 675, 696, 714-719, 745, 758, 768, 787</p> <p>IRG: 88, 103-104, 111-112</p>
<ul style="list-style-type: none"> • D. <u>Listening</u>—receives, attends to, interprets, and responds to verbal messages and other cues 	<p>SE: 35, 37, 317</p> <p>IRG: 103-104, 119-120</p>
<ul style="list-style-type: none"> • E. <u>Speaking</u>—organizes ideas and communicates orally 	<p>SE: 35, 37, 317</p> <p>IRG: 103-104, 119-120</p>

SCANS	
A Three-Part Foundation	
Thinking Skills	PAGE REFERENCES
<p>Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn and reasons</p> <ul style="list-style-type: none"> • A. <u>Creative Thinking</u>—generates new ideas 	<p>SE: 50</p> <p>IRG: 27, 83-84, 100, 105-106</p>
<ul style="list-style-type: none"> • B. <u>Decision Making</u>—specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative 	<p>SE: 27, 34-37</p> <p>IRG: 27, 83-84, 103-104</p>
<ul style="list-style-type: none"> • C. <u>Problem Solving</u>—recognizes problems and devises and implements plan of action 	<p>SE: 27, 36, 40-41, 750</p> <p>IRG: 27, 83-84, 87, 103-104, 145-146</p>
<ul style="list-style-type: none"> • D. <u>Seeing Things in the Mind’s Eye</u>—organizes, and processes symbols, pictures, graphs, objects, and other information 	<p>SE: 35, 48-54, 75-77, 417-466, 738-764</p> <p>IRG: 83-87, 103-104, 105-106, 125-126, 147-148</p>
<ul style="list-style-type: none"> • E. <u>Knowing How to Learn</u>—uses efficient learning techniques to acquire and apply new knowledge and skills 	<p>SE: 19-24, 33-37, 317, 768</p> <p>IRG: 33-36, 76-78, 103-104, 119-120, 147-148</p>
<ul style="list-style-type: none"> • F. <u>Reasoning</u>—discovers a rule or principle underlying the relationship between two or objects and applies it when solving a problem 	<p>SE: 19-22, 750</p> <p>IRG: 87, 103-104, 145-146</p>

SCANS	
A Three-Part Foundation	
Personal Qualities	PAGE REFERENCES
<p>Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty</p> <ul style="list-style-type: none"> • A. <u>Responsibility</u>—exerts a high level of effort and perseveres towards goal attainment 	<p>SE: 33-38, 176, 347, 392, 784</p> <p>IRG: 83-87, 103-104, 111-112, 121-122, 123-124, 149-150</p>
<ul style="list-style-type: none"> • B. <u>Self-Esteem</u>—believes in own self-worth and maintains a positive view of self 	<p>SE: 531</p> <p>IRG: 83-84, 100</p>
<ul style="list-style-type: none"> • C. <u>Sociability</u>—demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and on-going group settings 	<p>SE: 35, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>
<ul style="list-style-type: none"> • D. <u>Self-Management</u>—assesses self accurately, sets personal goals, monitors progress, and exhibits self-control 	<p>SE: 27, 34-37, 128, 552, 670, 719, 784</p> <p>IRG: 76-78, 83-84, 100, 103-104</p>
<ul style="list-style-type: none"> • E. <u>Integrity/Honesty</u>—chooses ethical courses of action 	<p>SE: 34-37, 176</p> <p>IRG: 83-87, 100, 103-104</p>

SCANS	
Five Workplace Competencies	
Resources	PAGE REFERENCES
Identifies, organizes, plans, and allocates resources <ul style="list-style-type: none"> • <i>A. Time</i>—Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules 	SE: 35 IRG: 83-85, 103-104
<ul style="list-style-type: none"> • <i>B. Money</i>—Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives 	SE: 25 IRG: 83-84, 103-104
<ul style="list-style-type: none"> • <i>C. Material and Facilities</i>—Acquires, stores, allocates, and uses materials or space efficiently 	SE: 62-63, 631-634, 647, 671-682 IRG: 105-106, 137-138, 139-140
<ul style="list-style-type: none"> • <i>D. Human Resources</i>—Assesses skills and distributes work accordingly, evaluates performance and provides feedback 	SE: 75, 83-87, 103-104, 119-120, 127-128, 147-148 IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148

SCANS	
Five Workplace Competencies	
Interpersonal	PAGE REFERENCES
<ul style="list-style-type: none"> • <i>A. Participates as Member of a Team</i>—contributes to group effort 	<p>SE: 35, 37, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>
<ul style="list-style-type: none"> • <i>B. Teaches Others New Skills</i> 	<p>SE: 35, 37, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>
<ul style="list-style-type: none"> • <i>C. Serves Clients/Customers</i>—works to satisfy customers' expectations 	<p>SE: 35-37, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>
<ul style="list-style-type: none"> • <i>D. Exercises Leadership</i>—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies 	<p>SE: 36-37, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>
<ul style="list-style-type: none"> • <i>E. Negotiates</i>—works toward agreements involving exchange of resources, resolves divergent interests 	<p>SE: 35, 37, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>
<ul style="list-style-type: none"> • <i>F. Works with Diversity</i>—works well with men and women from diverse backgrounds 	<p>SE: 36-37, 317, 469, 768</p> <p>IRG: 75, 83-87, 103-104, 119-120, 127-128, 147-148</p>

SCANS	
Five Workplace Competencies	
Information	PAGE REFERENCES
Acquires and uses information <ul style="list-style-type: none"> • <i>A. Acquires and Evaluates Information</i> 	SE: 19-20 IRG: 83-87, 99-100, 103-104
<ul style="list-style-type: none"> • <i>B. Organizes and Maintains Information</i> 	SE: 19-20, 48-54 IRG: 83-87, 99-100, 103-104, 105-106
<ul style="list-style-type: none"> • <i>C. Interprets and Communicates Information</i> 	SE: 35, 48-54, 75-77, 417-466, 738-764 IRG: 96, 103-104, 105-106, 125-126, 147-148
<ul style="list-style-type: none"> • <i>D. Uses Computers to Process Information</i> 	SE: 18, 23, 43-45, 85-110, 578, 684-685, 750 IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146

SCANS	
Five Workplace Competencies	
Systems	PAGE REFERENCES
<p>Understands complex inter-relationships</p> <ul style="list-style-type: none"> • <i>A. Understands Systems</i>—knows how social, organizational, and technological systems work and operates effectively with them 	<p>SE: 18, 23, 43-45, 85-110, 420, 430, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146</p>
<ul style="list-style-type: none"> • <i>B. Monitors and Corrects Performance</i>—distinguishes trends, predicts impacts on systems operations, diagnoses deviations in systems' performance and corrects malfunctions 	<p>SE: 18, 23, 43-45, 85-110, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146</p>
<ul style="list-style-type: none"> • <i>C. Improves or Designs Systems</i>—suggests modifications to existing systems and develops new or alternative systems to improve performance 	<p>SE: 18, 23, 43-45, 85-110, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146</p>

SCANS	
Five Workplace Competencies	
Technology	PAGE REFERENCES
<p>Works with a variety of technologies</p> <ul style="list-style-type: none"> • <i>A. Selects Technology</i>—chooses procedures, tools or equipment including computers and related technologies 	<p>SE: 18, 23, 43-45, 85-110, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146</p>
<ul style="list-style-type: none"> • <i>B. Applies Technology</i>—Understands overall intent and proper procedures for setup and operation of equipment 	<p>SE: 18, 23, 43-45, 85-110, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 125-126, 133-134, 139-140, 145-146</p>
<ul style="list-style-type: none"> • <i>C. Maintains and Troubleshoots Equipment</i>—Prevents, identifies, or solves problems with equipment, including computers and other technologies 	<p>SE: 18, 23, 43-45, 85-110, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 107-108, 125-126, 133-134, 139-140, 145-146</p>

National Standards of Technological Literacy

The Nature of Technology

STANDARDS	PAGE REFERENCES
Standard 1: Students will develop an understanding of the characteristics and scope of technology.	SE: 18, 23, 43-45, 85-110, 684-685 IRG: 57-62, 103-104, 105-106, 107-108, 139-140
Standard 2: Students will develop an understanding of the core concepts of technology.	SE: 18, 23, 43-45, 85-110, 684-685 IRG: 57-62, 103-104, 105-106, 107-108, 139-140
Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study.	SE: 18, 23, 43-45, 85-110 IRG: 57-62, 103-104, 105-106, 107-108

National Standards of Technological Literacy	
Technology and Society	
STANDARDS	PAGE REFERENCES
<p>Standard 4: Students will develop an understanding of the cultural, social, economic, and political effects of technology.</p>	<p>SE: 18, 19, 23, 43-45, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 133-134, 139-140, 145-146</p>
<p>Standard 5: Students will develop an understanding of the role of society in the development and use of technology.</p>	<p>SE: 18, 23, 43-45, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 133-134, 139-140, 145-146</p>
<p>Standard 6: Students will develop an understanding of the role of society in the development and use of technology.</p>	<p>SE: 18, 23, 43-45, 578, 684-685, 750</p> <p>IRG: 57-62, 103-104, 105-106, 133-134, 139-140, 145-146</p>
<p>Standard 7: Students will develop an understanding of the influence of technology on history.</p>	<p>SE: 23-24</p> <p>IRG: 55-62, 103-104</p>

National Standards of Technological Literacy	
Design	
STANDARDS	PAGE REFERENCES
Standard 8: Students will develop an understanding of the attributes of design.	SE: 49-50 IRG: 105-106
Standard 9: Students will develop an understanding of engineering design.	SE: 49-50, 569 IRG: 105-106, 133-134
Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.	SE: 20, 27, 36, 40-41, 750 IRG: 27, 83-84, 87, 103-104, 145-146

National Standards of Technological Literacy	
Abilities for a Technological World	
STANDARDS	PAGE REFERENCES
Standard 11: Students will develop abilities to apply the design process.	SE: 18, 23, 43-45, 85-110, 420, 430, 578, 684-685, 750 IRG: 57-62, 103-104, 105-106, 107-108, 125-126, 133-134, 139-140, 145-146
Standard 12: Students will develop abilities to use and maintain technological products and systems.	SE: 18, 23, 43-45, 85-110, 578, 684-685, 750 IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146
Standard 13: Students will develop abilities to assess the impact of products and systems.	SE: 18, 23, 43-45, 85-110, 578, 684-685, 750 IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146

National Standards of Technological Literacy	
The Designed World	
STANDARDS	PAGE REFERENCES
Standard 14: Students will develop an understanding of and be able to select and use medical technologies.	SE: 106-107, 112 IRG: 41-54, 88-94, 107-108, 109-110
Standard 15: Students will develop an understanding of and be able to select and use agricultural and related biotechnologies.	SE: 47, 104, 692-712 IRG: 103-104, 107-108, 141-142
Standard 16: Students will develop an understanding of and be able to select and use energy and power technologies.	SE: 43, 51, 85-110, 624, 713-737 IRG: 103-104, 105-106, 107-108, 137-138, 143-144
Standard 17: Students will develop an understanding of and be able to select and use information and communication technologies.	SE: 18, 23, 43-45, 85-110, 578, 684-685, 750 IRG: 57-62, 103-104, 105-106, 107-108, 133-134, 139-140, 145-146
Standard 18: Students will develop an understanding of and be able to select and use transportation technologies.	SE: 45, 750 IRG: 103-104, 145-146
Standard 19: Students will develop an understanding of and be able to select and use manufacturing technologies.	SE: 85-110, 748 IRG: 107-108, 145-146

National Standards of Technological Literacy	
The Designed World	
STANDARDS	PAGE REFERENCES
Standard 20: Students will develop an understanding of and be able to select and use construction technologies.	SE: 85-110, 622-667 IRG: 107-108, 137-138

Vocational Studies Evaluation Tool

Content–Vocational Studies	Comments
Career Opportunities	The <i>Basic Drafting Jobs</i> table found on page 19 in the Student Edition introduces students to a wide range of interesting, attainable career choices in the technical drawing industry and lists the qualifications for each job.
Career Search	The <i>Basic Drafting Jobs</i> table found on page 19 in the Student Edition introduces students to a wide range of interesting, attainable career choices in the technical drawing industry and lists the qualifications for each job.
Career Preparation	The <i>Basic Drafting Jobs</i> table found on page 19 in the Student Edition introduces students to a wide range of interesting, attainable career choices in the technical drawing industry and lists the qualifications for each job.
Employability Skills	<i>Glencoe Mechanical Drawing: Board and CAD Techniques</i> Student Edition includes <i>Success on the Job</i> sections which provide students with workplace tips to help students work successfully in drafting-related careers.

Content-Vocational Studies (continued)	Comments
Success in the Workplace	<i>Glencoe Mechanical Drawing: Board and CAD Techniques</i> Student Edition includes <i>Success on the Job</i> sections which provide students with workplace tips to help students work successfully in drafting-related careers.

Instruction and Assessment	Comments
Identifies a Sense of Purpose	Each chapter in the Student Edition begins with elements designed to quickly launch a student's focus and interest on the chapter's topic. Each chapter begins with an <i>Objectives</i> section to introduce the students to the new material that will be covered in the chapter. The students are presented with a list of the skills and knowledge that they can expect to have mastered once they have completed the chapter. Photographs expand and reinforce the technical drawing concepts presented in each chapter.
Builds on Student Ideals	Each chapter of the Instructor Resource Guide begins with an <i>Instructional Plan</i> which outlines the content overview and focus for each chapter.

Instruction and Assessment (continued)	Comments
Engages Students	Each chapter in the Student Edition begins with elements designed to quickly launch a student's focus and interest on the chapter's topic. Each chapter begins with an <i>Objectives</i> section to introduce the students to the new material that will be covered in the chapter. Each objective is followed by specific teaching suggestions to help students achieve the objective. Photographs expand and reinforce the technical drawing concepts presented in each chapter.
Develops Vocational Ideas	In <i>Glencoe Mechanical Drawing</i> , new learning is based on previous knowledge, with each new concept building on a prior experience.
Promotes Student Thinking	Both the Student Edition and the Instructor Resource Guide provide numerous activities and suggestions to help students incorporate and integrate critical thinking skills. On pages 28-31 several different types of learning styles are addressed, along with four factors used to motivate technical drawing students to learn, progress, solve problems, create, and succeed. A <i>Multiple Intelligence Chart</i> is found on pages 30-31 of the Instructor Resource Guide. Using a variety of methods and media will meet the styles of a variety of learners.

Instruction and Assessment (continued)	Comments
Assesses Student Progress	<p>At the end of each chapter of the Student Edition, you will find <i>Problems</i> sections that help you measure the progress of your students. While assessment of knowledge can be measured by a written test, skill assessment requires performance testing which can measure some type of action. The assessment performance task should be designed to measure understanding of the chapter objectives. “Real-world activities” at the end of the Student Workbook allow students to use their drafting knowledge and skills to solve problems that drafters may encounter in the workplace.</p>
Enhances The Learning Environment	<p><i>Glencoe Mechanical Drawing</i> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars to visual learners and low achievers. The researched-based content is presented in a visually dynamic style that will engage and motivate students. The program has been designed to offer a variety of lesson plan options which will develop the knowledge and problem-solving skills of all of your students – regardless of their learning styles and ability levels.</p>

Instruction and Assessment (continued)	Comments
Reading level is appropriate for interest and ability level of intended student group: level remains consistent throughout.	<i>Glencoe Mechanical Drawing</i> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars to visual learners and low achievers. The researched-based content is presented in a visually dynamic style that will engage and motivate students. The program has been designed to offer a variety of lesson plan options which will develop the knowledge and problem-solving skills of all of your students – regardless of their learning styles and ability levels.
Common wealth Accountability Testing System (CATS) “like” Assessment is provided	<i>SkillsUSA-VICA</i> programs help establish industry standards for classroom job skill training. The <i>ADDA</i> provides recognition to schools which meets its established standards to provide quality instruction in the drafting profession.
Variety of Assessments (diagnostic, formative, summative, open response, multiple choice, individual, small group, oral, demonstrations, presentations, self and peer performance, portfolio prompts) is included.	Throughout each chapter of the Student Edition, you will find <i>Problems</i> sections that help you measure the progress of your students. While assessment of knowledge can be measured by a written test, skill assessment requires performance testing which can measure some type of action. The assessment performance task should be designed to measure understanding of the chapter objectives.

Instruction and Assessment (continued)	Comments
Includes activities and opportunities for integration of technology.	Students use the <i>Career Link</i> sections found throughout the Student Edition to research basic technical drawing concepts on the Internet. References are made to the American Design Drafting Association at www.adda.com .
Reflects researched-based practices (e.g. hands-on activities, technology, problem-solving situations)	<i>Glencoe Basic Technical Drawing</i> has achieved the highest degree of accuracy through rigorous scientifically-based research. This edition is the product of the most recent research studies, teacher feedback, and detailed editorial development. The result is an up-to-date, solid foundation for an engaging, stimulating, and high-quality drafting education course for your students.
Differentiation techniques and activities suggested.	<i>Glencoe Basic Technical Drawing</i> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars to visual learners and low achievers. The researched-based content is presented in a visually dynamic style that will engage and motivate students. The program has been designed to offer a variety of lesson plan options which will develop the knowledge and problem-solving skills of all of your students – regardless of their learning styles and ability levels.

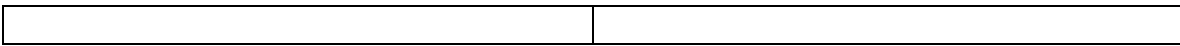
Organization and Structure	Comments
<p>Organization is logical and allows for spiraling of content.</p>	<p><i>Glencoe Basic Technical Drawing</i> is composed of 25 chapters. Each chapter follows a straightforward format, beginning with an <i>Objectives</i> section to prepare students with the technical drawing concepts being introduced in the chapter. Each chapter closes with a <i>Problems</i> section which provides a review of important technical drawing terms and concepts, as well as a variety of activities.</p>
<p>Vocabulary and key terms are clearly defined and easily accessible within each lesson.</p>	<p>Each chapter begins with a list of <i>Important Terms</i> presented in the chapter. These key terms are printed in italic type the first time they are introduced and defined within the text.</p>
<p>Visual illustrations (e.g. graphs, charts, models) and examples are clearly presented and content-related</p>	<p>Graphs, charts, and models are used throughout the book to illustrate concepts. Examples are related to the content of the chapter.</p>
<p>Illustrations and language reflect diversity (e.g. racial, ethnic, cultural, age, gender, disabilities).</p>	<p>A variety of situations that reflect diversity are presented throughout the text.</p>

<p style="text-align: center;">Organization and Structure (continued)</p>	<p style="text-align: center;">Comments</p>
<p>Legible type, length of lines, spacing, and page layout and widths of margins contribute to overall appearance and use.</p>	<p><i>Glencoe Basic Technical Drawing</i> has achieved the highest degree of accuracy through rigorous scientifically-based research. This edition is the product of the most recent research studies, teacher feedback, and detailed editorial development. The result is an up-to-date, solid foundation for an engaging, stimulating, and high-quality drafting education course for your students.</p>
<p>Student materials seem durable and conducive to daily use.</p>	<p>The very best materials are used in all Glencoe products. The materials are easy for students to use, both in school and at home.</p>
<p>Includes sufficient glossary, index and appendices.</p>	<p>The <i>Index</i> can be found on pages 605-622. The <i>Glossary</i> can be found on pages 591-604. The <i>Appendix</i> can be found on pages 561-590.</p>
<p>Employs accurate grammar and spelling.</p>	<p><i>Glencoe Basic Technical Drawing</i> has achieved the highest degree of accuracy through rigorous scientifically-based research. This edition is the product of the most recent research studies, teacher feedback, and detailed editorial development. The result is an up-to-date, solid foundation for an engaging, stimulating, and high-quality drafting education course for your students.</p>

Organization and Structure (continued)	Comments
<p>Organization of material can be effectively used with Standards Based Units, Core Content and Program of Studies.</p>	<p>The correlation between <i>Glencoe Basic Technical Drawing</i> and the standards endorsed by the SkillsUSA-VICA is strong.</p>

Resource Materials	Comments
<p>Teacher materials coordinate easily with student materials (e.g. additional resources included at point of need, student pages shown, integration of technology indicated).</p>	<p>Each chapter in the Instructional Resource Guide begins with an <i>Instructional Plan</i> with a <i>Focus and Chapter Overview</i> Section designed to introduce, teach and assess the student’s mastery of the objectives introduced in the chapter.</p>
<p>Activities are included that adapt to the various learning styles, intelligences, and interest / ability levels.</p>	<p><i>Glencoe Basic Technical Drawing</i> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars to visual learners and low achievers. The researched-based content is presented in a visually dynamic style that will engage and motivate students. The program has been designed to offer a variety of lesson plan options which will develop the knowledge and problem-solving skills of all of your students – regardless of their learning styles and ability levels.</p>

<p style="text-align: center;">Organization and Structure (continued)</p>	<p style="text-align: center;">Comments</p>
<p>Extension activities including adaptations and accommodations for students with special needs.</p>	<p>A <i>Meeting Special Needs</i> section is included in the Instructor Resource Guide on pages 29-30 which allows you to meet the needs of all learners. The <i>Learning Approaches</i> section found on pages 27-28 in the Instructor Resource Guide allows you to match learning experiences to student learning preferences, or learning styles. Both <i>Brain-Based Learning</i>, also called <i>brain-compatible learning</i> and the <i>Gregoric Learning Style Method</i> are discussed, as well as <i>learning modalities (visual, auditory, and kinesthetic)</i> to help you choose the type of media you use to present material.</p>
<p>Resources provide objectives, background information, common student errors, hints, advice for lesson implementation and real-world connections, connections with career and / technology and references (e.g. solution manuals, study guides).</p>	<p>In <i>Glencoe Basic Technical Drawing</i>, students are presented with background information and then prompted to work through a set of problems, respond to a set of questions, and perform a hands-on experiment. A <i>Career Link</i> feature appears at the beginning of each part of the text and provides the students with an opportunity to explore a career within the drafting industry.</p>
<p>Suggestions are made for integration of themes and / or interdisciplinary instruction.</p>	<p>Integration of technical programs with occupational and academic education allows students to relate information learned in academic courses to the knowledge and skills developed in occupational courses. Related communication, mathematics, and science applications can be found in the <i>Basic Technical Drawing Student Edition</i>.</p>



Organization and Structure (continued)	Comments
Integration opportunities suggested and examples given.	Integration of technical programs with occupational and academic education allows students to relate information learned in academic courses to the knowledge and skills developed in occupational courses. Related communication, mathematics, and science applications can be found in the <i>Basic Technical Drawing</i> Student Edition.
Teacher resources are available online.	Teacher resources are available online at www.knowledgematters.com



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